

Mr. C. S. Moase,
Manager,
Special Services Section.

Mr. A. G. Stermac,
Principal Foundation Engr.,
Foundation Section,
Materials & Research Division.

August 26, 1963

D.H.O. FOUNDATION INVESTIGATION REPORT --
Proposed D.H.O. Patrol Yard at Hwy. #612,
Lot 3, Concession 5, County of Muskoka,
Township of Freeman, District No. 11
V.E. 63-F-82 -- W.P. (Nil)

It is proposed to erect a D.H.O. Patrol Garage on Hwy. #612, approx. 2.5 miles East of the Village of MacTier. A request for a foundation investigation was received from Mr. F. E. Cavell, dated July 3, 1963.

In order to determine the properties of the soil and decide on the type of foundations, an investigation was carried out by this Section. The field investigation was confined to 4 boreholes, supplemented by 7 dynamic cone penetration tests.

The elevations, as well as the locations of the bore and penetration holes, are shown on Dwg. No. 63-F-82A, attached to this report.

The stratigraphy of the soil, throughout the site, was found to be quite uniform. The upper 6" to 12" consist of black organic topsoil, followed by compact to very dense silty fine sand to a penetrated depth of 20 ft.

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August 26, 1963

The safe bearing pressure for spread footings 2 feet wide, at a depth of 5 feet below ground level, is estimated to be 3500 lbs./sq.ft.

At the time of the investigation, no ground water level was encountered. It may be assumed that the water level will vary with the seasons of the year.

The sand pile at the indicated location, may be built without danger of base failure.

The recommendations given by the Regional Materials Engineer, Mr. P. Arkema, for grading and paving, are as follows:

Granular material should be placed to a depth of 21" throughout the site, as required, and should consist of 6" G.B.C. 'A' over Sand Cushion.

Surfacing material should consist of 3½" -- 1½" HL-4 surface course and 2" HL-4 binder course.

The estimated distances from the patrol yard site to the nearest wells is 200'-0" to the East and 500'-0" to the North.

The field work, performed during July 22 and 23, 1963, together with the preparation of this report, was undertaken by Mr. W. W. Kulmatickas, Project Foundation Engineer. The investigation was carried out under the general supervision of Mr. K. G. Selby, Senior Foundation Engineer, who reviewed this report.

We believe the information contained in this report will suffice for your design work. However, should further information be required, please do not hesitate to contact our Office.

WWK/MdeF
Attach.

cc: C. S. Moase (4)
E. J. Orr
H. D. McMillan
E. H. Jones
T. J. Kovich
A. Watt
Foundations Office
Gen. Files ✓

K. Y. Lo
K. Y. Lo,
SUPERVISING FOUNDATION ENGR.
For:
A. G. Stermac,
PRINCIPAL FOUNDATION ENGR.

APPENDIX I.

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63-F-02 196

NBAR DOWN 5 AUGUST 14/63 1145AM VR

E R SAINT REG MAT ENGR

Mc Tier

FOUNDATION SECTION HAVE COMPLETED FIELD WORK AND PROPOSE

D H O PATROL YARD HWY 612 LOT 3 CON 5 FREEMAN TWP

COUNTY OF MUSKOKA

PLEASE LET US HAVE YOUR RECOMMENDATIONS REGARDING GRADING

AND SURFACING

K G SELBY SR FOUNDATION ENGR

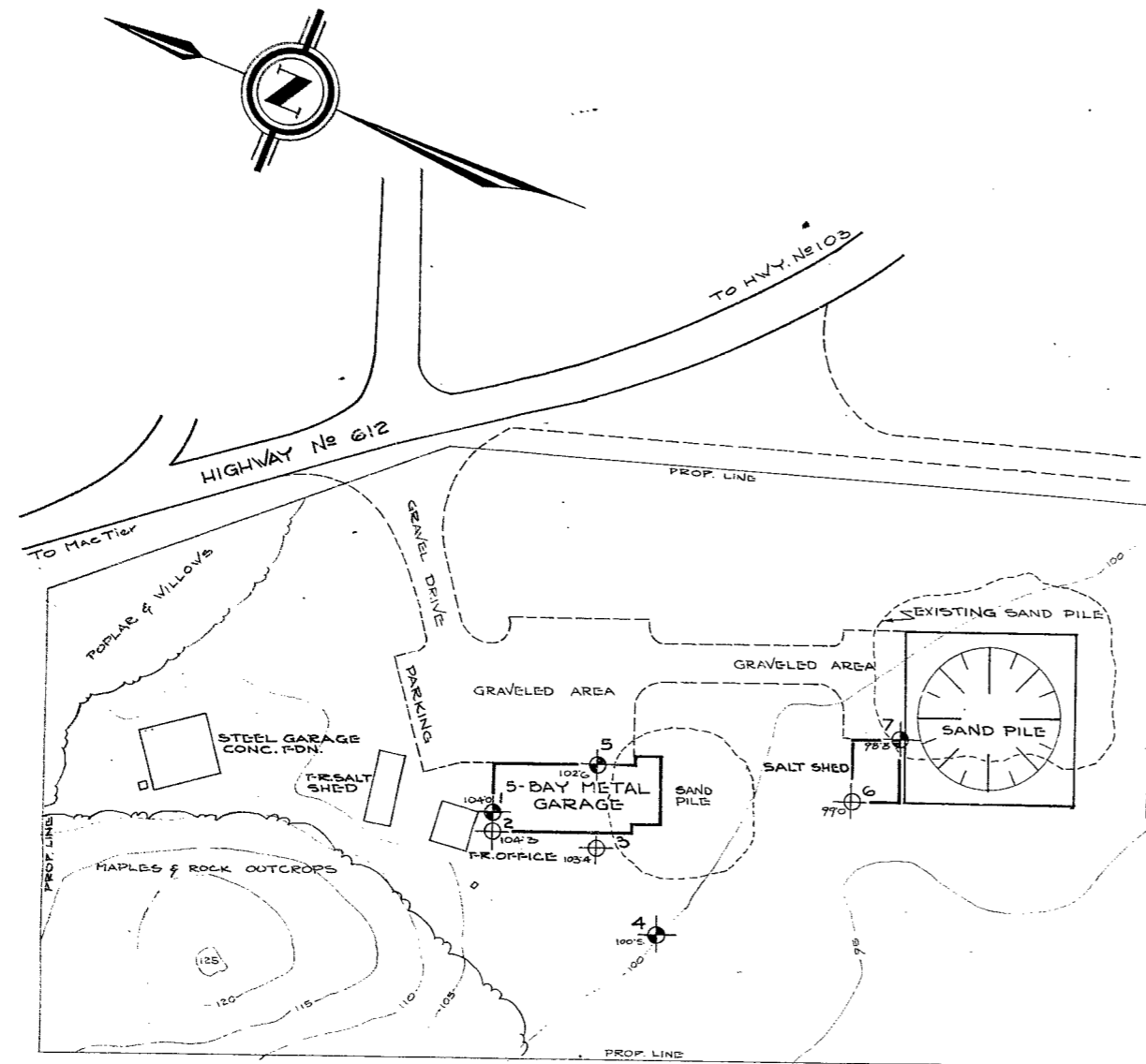
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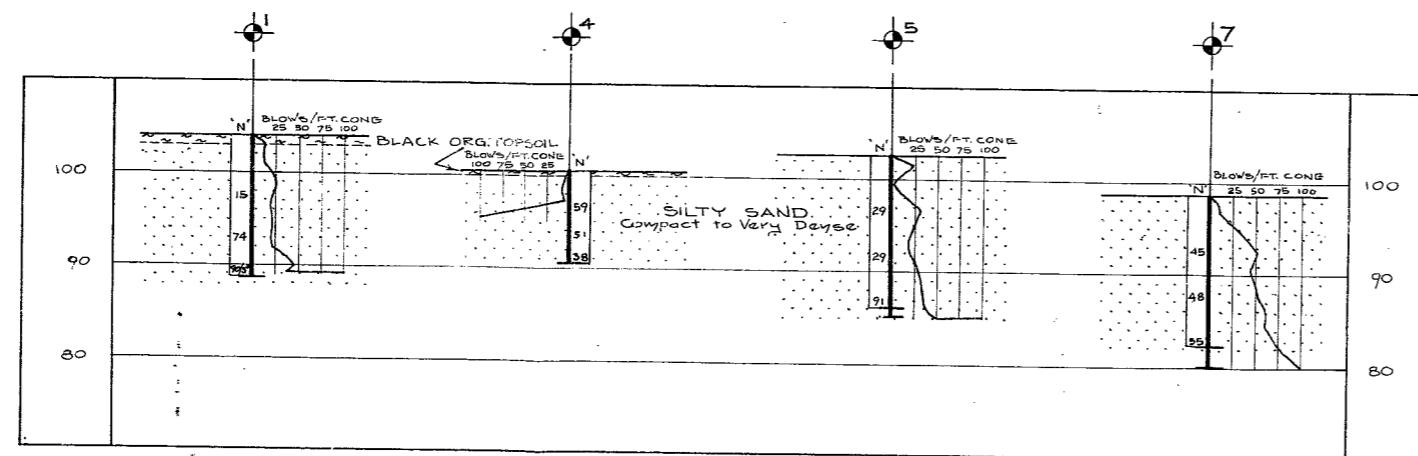
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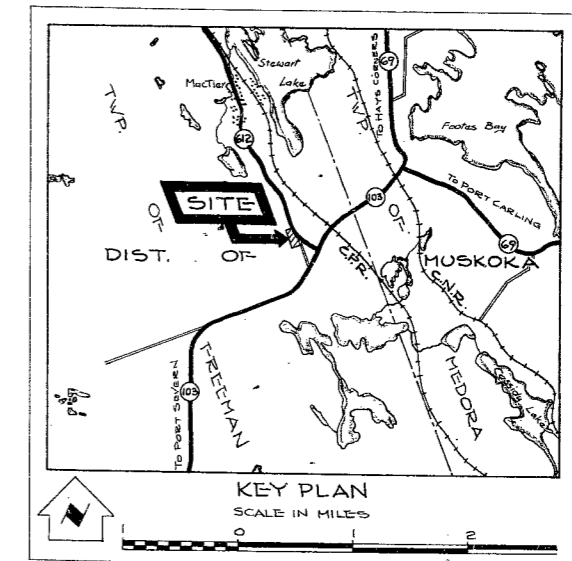
PATROL YARD.



PLAN
SCALE
1 IN. = 50 FT.



SUB-SOIL STRATIGRAPHY
SCALE
VERT. 1 IN. = 10 FT.



- ⊕ BORE & CONE PENETRATION HOLE
- ⊙ CONE PENETRATION HOLE

THE BOUNDARIES BETWEEN SOIL AREAS HAVE BEEN ESTABLISHED ONLY AT THE BORE HOLE LOCATIONS. BETWEEN BORE HOLE LOCATIONS THE SOIL IS ASSUMED TO BE THE SAME AS THAT REPORTED FROM GEOLOGICAL EXPOSURE AND MAY BE SUBJECT TO CONSIDERABLE ERROR.

DEPARTMENT OF HIGHWAYS - ONTARIO		
MATERIALS & RESEARCH SECTION		
MAC TIER PATROL YARD		
ORIGINATED W. KULMATICKAS	DISTRICT NO. 11	DATE 1 AUG. 1963
DRAWN D.G. HOSHOVATNIK	W.P. NO.	JOB NO. 63 F-82
CHECKED	SCALE AS SHOWN	DRAWING NO.
APPROVED		63 F-82A